

IN THE ABSTRACT:

Please DELETE the Abstract in its entirety and substitute the following new Abstract.

A photodetector detecting reflected light components from an optical medium, the photodetector including a first detector divided into eight sections detecting the reflected light components and converting the light components into electrical signals, a first calculating portion calculating a first tracking error signal from the electrical signals by a differential push-pull method, a second calculating portion calculating a first focusing error signal by an astigmatism method and calculating a second tracking error signal by a differential phase detection method from the electrical signals converted by the first detector; a second detector divided into four sections detecting the reflected light components reflected by the optical recording medium to convert the light components into electrical signals; and a third calculating portion calculating a second focusing error signal by the astigmatism method and calculating a third tracking error signal by the differential phase detection method from the electrical signals converted by the second detector.